



KPPC

Kentucky's Resource Center for
Environmental Sustainability

J.B. Speed School of Engineering University of Louisville



Kentucky Energy Efficiency
Program for Schools
High-Performance:
The Whole Picture

March 23, 2011

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KEEPS is a Partnership

KPPC – Kentucky Pollution Prevention Center



In partnership with:

Department for Energy Development & Independence (DEDI)
Kentucky Chapter of the
National Energy Education Development Project (NEED)
Kentucky Green & Healthy Schools (KGHS)
Kentucky School Boards Association (KSBA)
Kentucky School Plant Management Association (KSPMA)



Commitment to Continual Improvement

KEEPS provides resources that help districts:

- implement school board approved energy policies
- develop district-wide, cross-functional energy teams to spearhead energy management program efforts
- implement effective communication plans to raise awareness about energy-saving initiatives
- understand and utilize resources provided by KEEPS and its partner organizations
- become ENERGY STAR® Partners



KEEPS Status Report Results:

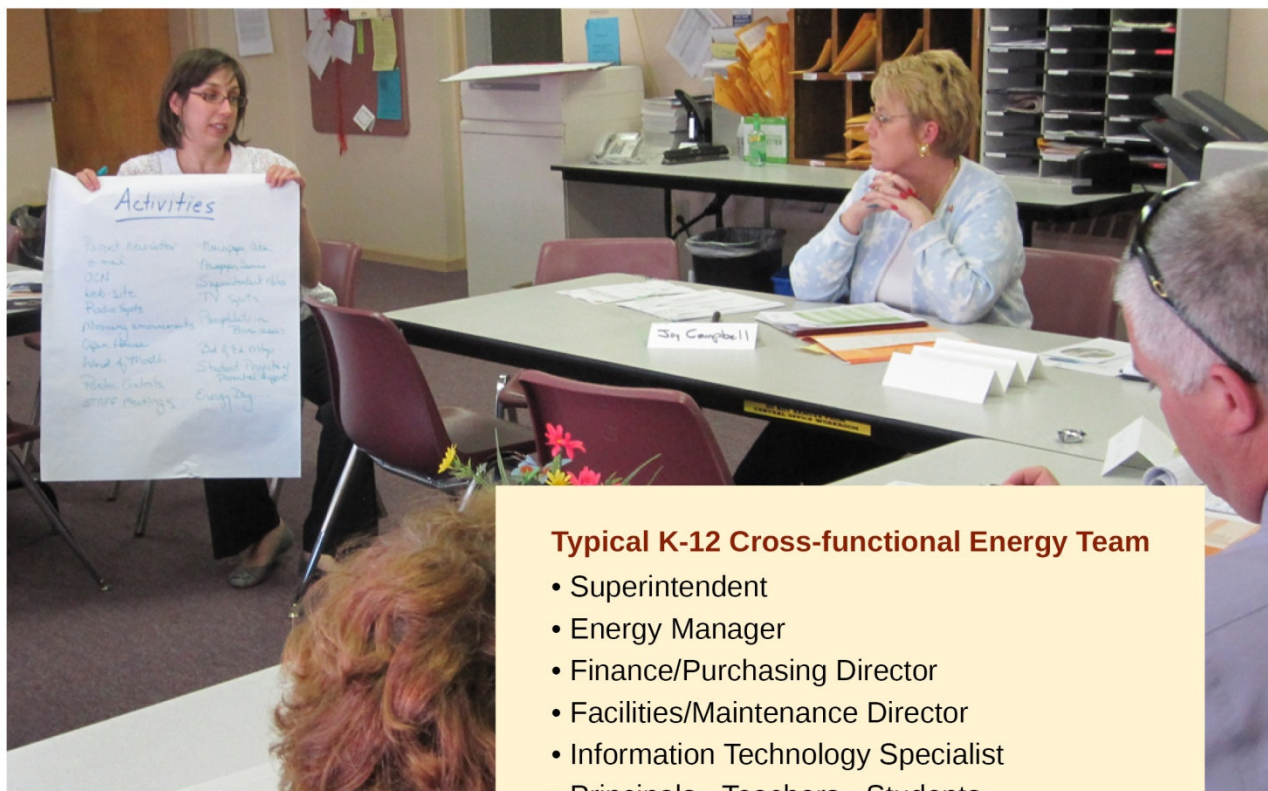
All 174 of Kentucky's school districts have enrolled in KEEPS

In 2010, of all 174 Kentucky school districts:

- 173** - established school board approved energy policies to garner leadership buy-in
- 153** - were actively involved in KEEPS and participated in district leadership meetings
- 142** - had energy management initiatives spearheaded by 48 energy managers
- 98** - established cross-functional energy teams comprised of representatives from different areas of operation and met regularly
- 97** - established baseline and follow-up energy performance tracking standards



In 2010, KEEPS representatives attended 127 district energy team meetings



Typical K-12 Cross-functional Energy Team

- Superintendent
- Energy Manager
- Finance/Purchasing Director
- Facilities/Maintenance Director
- Information Technology Specialist
- Principals - Teachers - Students
- Food Services Manager
- Curriculum Coordinator



Leveraging ENERGY STAR®



K-12 ENERGY STAR Partners in Kentucky – **68**

58 became *ENERGY STAR Partners* in 2010

K-12 ENERGY STAR-labeled facilities in Kentucky – **87**

In Fiscal Year 2010 Kentucky's school districts purchased:

516 ENERGY STAR-labeled exit signs

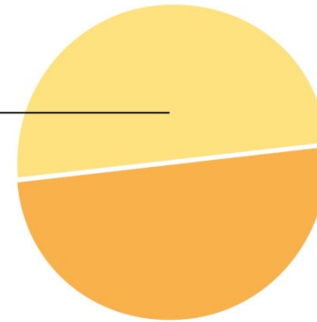
484 ENERGY STAR-labeled HVAC units

954 ENERGY STAR-labeled office equipment (printers, copiers, etc.)

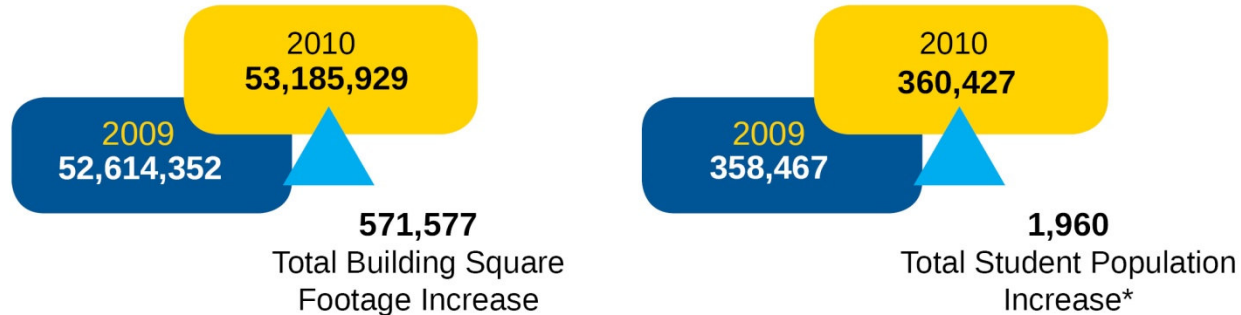


Achieving Results

97 of Kentucky's 174 school districts (**56%**) submitted Energy Management Reports for both fiscal years 2009 and 2010.



For those **97 districts**, building square footage and student population **increased**.



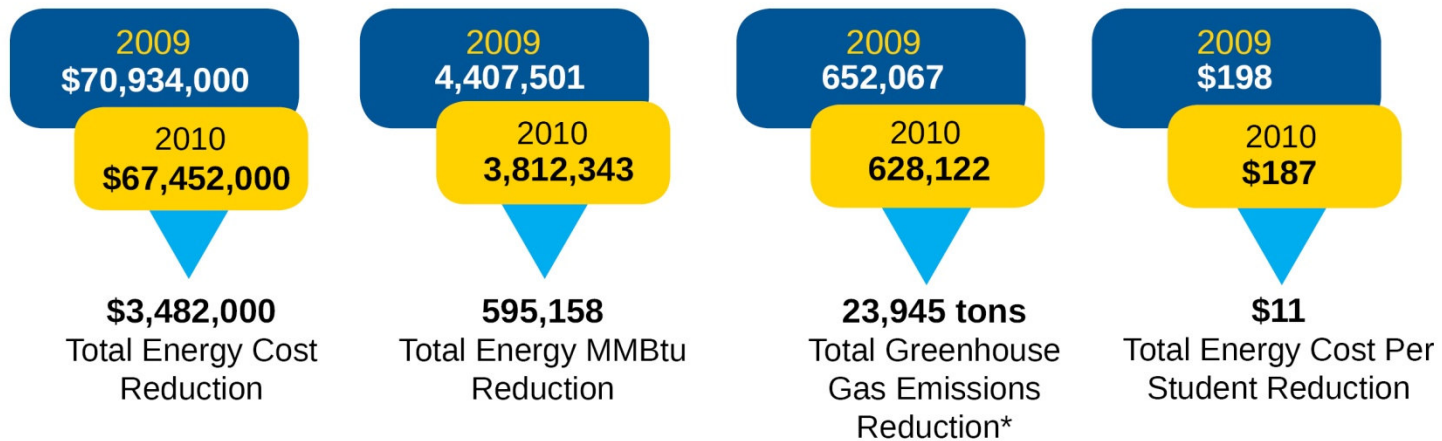
*Student population numbers provided by Superintendent's Annual Attendance Report (SAAR)

NOTE: SAAR = 8,600 for all 174 districts



Achieving Results

*The **97 districts** actually **lowered** total energy usage and **decreased** the average annual cost per student, even as facility size and student population grew.*



*Result provided using KY DEDI air emissions calculator



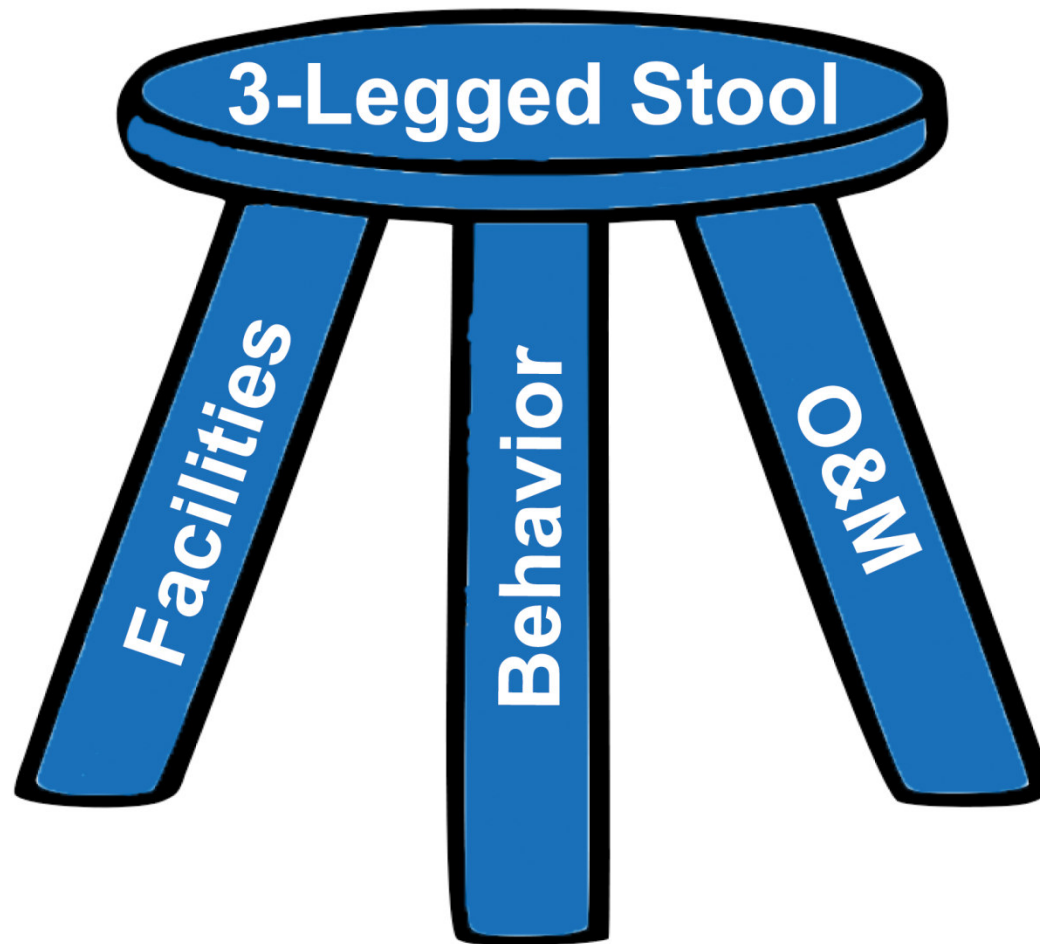
KEEPS Moving Forward in 2011

Goals for KEEPS in 2011 include:

- Drive school districts' progress through the seven-step energy management process
- Train school district energy managers and energy teams on how to conduct utility bill analyses and energy efficiency assessments of facilities
- Distribute awards to districts that achieve success throughout the program
- Work with partner organizations to deliver efficient and effective services



The Whole Picture



The Whole Picture

Facilities – A tool to achieve, but no guarantee

- New Designs
- Renovations
- Facility Upgrades
 - Lighting, HVAC, Exit Lights



The Whole Picture

Behavior – Make the Commitment

- School Board Approved Policies
- Communications Plans
 - Consistent message
 - Different techniques for each stakeholder
- Energy Teams
 - District Level
 - School Level



The Whole Picture

Operations and Maintenance

- Retro Commissioning
- Ongoing Training
- Continuous Professional Education
- Maintenance Policies and Procedures



What are the dangers?

Technology Change – Obsolescence

- Without culture change, revert back to bad behaviors

Ownership by Maintenance Staff

- Are they trained?
- Up-to-speed with latest operations?
- Do they want to be?



How do you affect culture change?

- Strong school district leadership
- Dedicated Energy Manager or Team Lead
- Cross-functional energy team
- Clearly defined message
- Well-executed communications plan
- Constantly revisit and revise
- Design schools as learning labs



Electronic Outreach

- Visit our website at:
 - www.kppc.org/KEEPS
- “Like” us on Facebook at:
 - www.facebook/KyKEEPS
- *KEEPS Moving Forward* e-newsletter





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